# SIN 359

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**Suppliers' Information Note**

*For The BT Network*

# Relay UK
## Service Description

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# 1. Introduction

This SIN describes the Relay UK (formerly Next Generation Text (NGT) or Text Relay) Service (The Service), that is provided for customers who need to use real-time text in association with phone calls because of their needs (primarily deafness / hearing loss and speech impairment).

The Service offers the option of routing calls that will or could involve real-time text communications through The Service. The Relay UK Platform is accessed on a per call basis by prefixing the full telephone number with a Relay UK Prefix.

The Service provides the following features:

- an app that provides a real-time text channel in parallel with a telephone call on both PSTN and IP networks
- automated access to a Relay Assistant
- access to operator assistance and Directory Information Services using the existing short code numbers prefixed with 18001 and a Public Emergency Call Service using 18000
- call progress voice announcements in a form suitable for text-users
- allows communications between incompatible textphones
- the Calling Line Identification (CLI) number of the calling line, or the reason for its absence, is passed through The Service
- uses V.18[1] compliant modems

## 1.1 Text-device protocols

Real-time text-devices can connect to The Service using either:

- the Relay UK App in parallel with a standard telephone call, or
- a textphone that is compatible with the ITU-T V.18 Recommendation[1]

## 1.2 Text-devices

In this document the term ‘text-device’ is used to describe both the Relay UK App and a textphone.

### 1.2.1 Relay UK End-user App

Relay UK provides an app that is used in parallel with a phone call. The App runs on Android and Apple smartphones and tablets, as well as on Windows and Apple Mac computers and can be downloaded from the appropriate app store.

### 1.2.2 Textphones

Whilst app usage is encouraged, particularly over IP connections, Textphones can still be used and the Relay UK modems support the protocols within the V.18 Recommendation, but it is advantageous to customers using Textphones that they use the carrier based protocol such as native V.18 or V.21 [2].

If non-carrier based textphone protocols such as Baudot are used, some characters have to be typed in order to detect the protocol being used. To prompt the user an announcement will be sent to the textphone saying “Relay UK Please type hello GA”.

[1] On IP networks a textphone plugged into a broadband router may function in the same way as when plugged into a PSTN connection but this is not guaranteed.

Additionally, for textphones which do not generate tones during a state change i.e. from voice to text or from text to voice, a signal will have to be typed or keyed by the text-user.

### 1.3 Announcements

Call status announcements from The Service to the customer are delivered in a form appropriate to that customer's communication mode at that moment in time. A text-user will receive announcements in text using a protocol compatible with their textphone or the Relay UK App, and a phone-user will receive announcements as tones or voice.

Relevant text announcements from The Service will be prefixed with "Relay UK" so that the text-user can identify that the announcement has been sent by The Service and not by the distant end. An example of such an announcement would be "Relay UK The number you called is busy, please try later."

### 1.4 Call Types

The Service provides automatic access to a Relay Assistant for voice-to-text and text-to-voice calls. The Service also supports both text-to-text and voice-to-voice calls.

## 2. Call Set-up

### 2.1 Calls from a Text-user

To use The Service a text-user will prefix the full telephone number they are calling with the Relay UK Prefix, 18001. The Service requires that the originating network presents the Relay UK Prefix together with the destination number as the dialled digits. If a text-user wants to call a number such as 020 7946 0123, then the number they will dial will be 18001 020 7946 0123 and this will be presented to The Service.

Before The Service makes the second leg of the call, The Service must connect to a text-device - either the Relay UK App or a textphone. This connection is then used to convey call status information.

When the call is connected through to the called telephone, and that telephone 'rings', The Service sends a text announcement "Relay UK ring ring" to the caller, indicating that the telephone they are calling is ringing.

If the phone number being called is busy the caller will receive the following text announcement "Relay UK The number you called is busy, please try later.".

When the call is answered The Service will detect whether there is a text-device present or not. If there is no text-device then a Relay Assistant will be connected into the call. If there is a text-device then real-text communication can commence between the two parties (See: Text-through – Relay UK App).

### 2.2 Calls from a Phone-user

For hearing users the Relay UK Prefix is 18002. Phone-users should use The Service when they wish to communicate with a text-user or when they think there is the possibility that the call may be answered by a text-user, as in the case of a household of people with mixed ability i.e. text-users and hearing users in the same household.

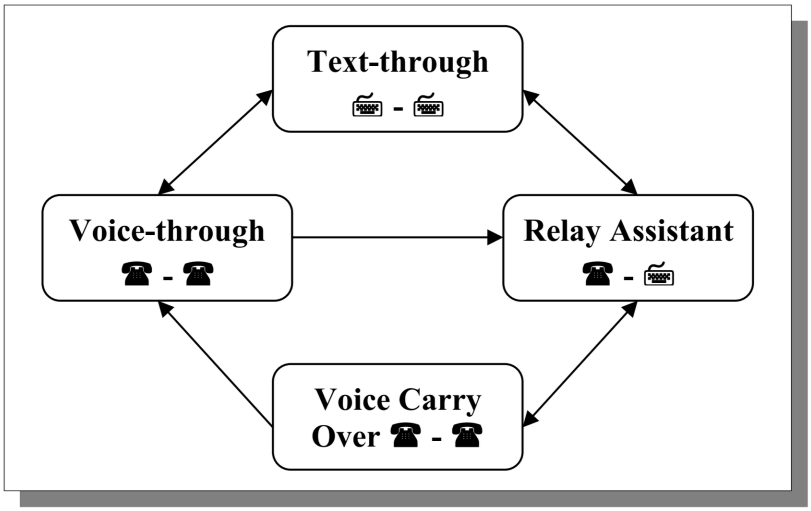
A hearing caller will dial the Relay UK Prefix 18002 followed by the full telephone number, so that a call to 020 7946 0123 will become 18002 020 7946 0123.

When the call is connected through to the called number the caller will hear ringing, busy or failure tones or they will receive an equivalent Relay UK voice announcement.

When the call is answered The Service will detect whether there is a text-device present or not. If there is a text-device then a Relay Assistant will be connected in to the call. If no text-device is present then the voice path is switched through allowing the voice conversation to commence.

## 3. Conversation

Once a call has been established and the called party answers, The Service supports four different modes or ways of communicating. Each of these modes is described below. A call will stay in each mode until one or both of the terminals change i.e. one party switches from text to voice or vice versa. At this point The Service decides which mode to move the call into, dependent on the terminals that are present at each end of the call. The next mode is also dependent on the previous mode as shown in the diagram.




### 3.1 Voice-through - textphone

In this mode The Service connects the voice path through between the two parties enabling them to talk to each other.

### 3.2 Text Relay – Relay UK App & textphone

A Relay Assistant will be connected into a phone conversation when one party is a text-user and the other is a hearing user. Text from the text-user is read and spoken to the hearing user by the Relay Assistant. In the other direction the Relay Assistant types the spoken message from the hearing user to the text-user. When The Service detects that a Relay Assistant is required both parties are informed, using the appropriate means, that a Relay Assistant is being connected.

The Relay Assistant will remain connected into the call until the end of the call, however if they are no longer required the Relay Assistant will release themselves from the call.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### 3.3 Voice Carry Over – Relay UK App

The Relay UK App works in parallel with a phone call and there is a permanent voice path between the calling party, called party and the Relay Assistant. This means that a text-user can speak direct to the other party, or hear the other party without needing to go via the Relay Assistant.

### 3.4 Voice Carry Over - textphone

This is when a textphone user switches from using text to speaking or hearing mode when there is a Relay Assistant associated with the call. When the textphone user switches to voice they are able to talk to the other person. From Voice-through mode the call can either return to the Relay Assistant or if they are no longer required it will go into Voice-through.

### 3.5 Text-through – Relay UK App & textphone

When in Text-through mode The Service enables real-time text communications to take place between two text-users. The text-devices do not have to be the same, but must both be supported by The Service eg. Relay UK app or textphone using V18, Baudot, as The Service decodes and translates the protocols being used by the two text-devices. When two Relay UK Apps, two textphones, or a Relay UK App and a textphone are connected together through The Service, the devices do not actually connect directly to each other.

## 4. TextNumbers

Relay UK TextNumbers are alternative access numbers that can be associated with a text-user's fixed or mobile phone number. When a TextNumber is dialled the call is routed through The Service without the 18002 prefix being used. More information is available at: https://www.relayuk.bt.com/relay-uk-services/textnumbers.html .

## 5. Calling Line Identification

As with other network nodes The Service passes the Calling Line Identification (CLI), Calling Line Identification Presentation (CLIP) and Withheld flag, through to the destination network.

As with a standard call the CLI/CLIP can be withheld or released by dialling 141 (per call withhold) or 1470 (per call release) **before** the Relay UK Prefix e.g. 141 18001 020 7946 0123.

## 6. Call Return

By dialling 18001 1471 the text-user can see the CLI of their last incoming call provided that call used The Service and the CLI was not withheld. The text-user has the option of keying 3, which will instruct The Service to attempt a return call. This facility operates independently of the PSTN Call Return service.

## 7. International Calls

Relay UK will allow both text-users and hearing users to make calls from the UK to international telephone numbers by using the Relay UK Prefix. Text-users and hearing users can also call in to the UK from overseas via the International Relay Assist contact numbers – further details on the website. Language translation is not provided by The Service and character-set compatibility cannot be guaranteed.

## 8. Call Rejection

Under normal circumstances The Service will attempt to connect all calls to the destination indicated in the dialled digits presented to The Service. However in the following circumstances calls will be rejected:

- when the call does not have a valid Network CLI (except for 18000 calls)
- when the destination is an international or premium rate number and the Basic Service Marks from the originating network indicate that the call type is barred
- when there is a known fraud or service misuse issue involving either the calling number or the destination

## 9. Further information

Further information about The Service can be obtained from the website at https://www.relayuk.bt.com/ , with information specifically aimed at Communications Providers at: https://www.relayuk.bt.com/communication-providers.html

If you have enquiries relating to the contents of this document then please e-mail sinet.helpdesk@bt.com

## 10. References

ITU-T Recommendation

| | | |
|---|---|---|
| [1] | V.18 | Recommendation V.18 - Operational and interworking requirements for DCEs operating in the text telephone mode |
| [2] | V.21 | Recommendation V.21 - 300 bits per second duplex modem standardized for use in the general switched telephone network |

## 11. Abbreviations

| | |
|---|---|
| CLI | Calling Line Identification |
| ITU-T | International Telecommunication Union - Telecommunications Standardization Sector |
| PSTN | Public Switched Telephone Network |
| SIN | Suppliers' Information Note |

## 12. History

| | | |
|---|---|---|
| Issue 1 0 | November 2000 | |
| Issue 1.1 | September 2002 | Editorial update. |
| Issue 1.2 | September 2004 | Clause covering compliance of terminal equipment removed.<br>Editorial changes. |
| Issue 1.3 | April 2009 | Name change from TextDirect to Text Relay |

| | | |
|---|---|---|
| Issue 1.4 | December 2011 | Call Rejection section added |
| Issue 1.5 | June 2016 | Changed to reflect NGT changes<br>Change SINet site references from http://www.sinet.bt.com to http://www.btplc.com/sinet/ |
| Issue 1.6 | July 2019 | Editorial changes plus changes to website links in Section 4 & 9 |
| Issue 1.7 | December 2019 | Editorial changes to reflect Service re-branding |
| Issue 1.8 | August 2020 | Change SINet site references from http://www.btplc.com/sinet/<br>to https://www.bt.com/about/sinet |
| Issue 1.9 | August 2021 | Changes to section ordering and other minor editorial changes |
| Issue 1.10 | September 2022 | Minor copy change |
| Issue 1.11 | October 2023 | Minor wording updates |

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